

CLAIMS

What is claimed is:

1. A process for removing residues from a structure, comprising the steps of:

    providing an oxidant solution;

    heating said oxidant solution to a temperature of at least about 60 degrees C; and

    applying said oxidant solution to the structure.

2. The process of claim 1 wherein said oxidant solution comprises hydroxylamine.

3. The process of claim 1 wherein said applying said oxidant solution to the structure comprises spraying said oxidant solution onto the structure.

4. The process of claim 3 wherein said oxidant solution comprises hydroxylamine.

5. The process of claim 1 wherein said heating said oxidant solution to a temperature of at least about 60 degrees C comprises heating said oxidant solution to a temperature of from about 60 degrees C to about 80 degrees C.

6. The process of claim 5 wherein said oxidant solution comprises hydroxylamine.

7. The process of claim 5 wherein said applying said oxidant solution to the structure comprises spraying said oxidant solution onto the structure.

8. The process of claim 7 wherein said oxidant solution comprises hydroxylamine.

9. A process for removing residues from a tungsten plug structure, comprising the steps of:

providing an oxidant solution; and  
applying said oxidant solution to the tungsten plug structure.

10. The process of claim 9 wherein said oxidant solution comprises hydroxylamine.

11. The process of claim 9 wherein said applying said oxidant solution to the structure comprises spraying said oxidant solution onto the structure.

12. The process of claim 9 further comprising the step of heating said oxidant solution to a temperature of at least about 60 degrees C prior to said applying said oxidant solution to the tungsten plug structure.

13. A process for removing residues from a tungsten plug structure having at least one tungsten plug and a tungsten layer, comprising the steps of:

etching said tungsten layer from said tungsten plug structure;

providing an oxidant solution; and

removing the residues from the tungsten plug structure by applying said oxidant solution to the tungsten plug structure.

14. The process of claim 13 wherein said oxidant solution comprises hydroxylamine.

15. The process of claim 13 wherein said applying said oxidant solution to the tungsten plug structure comprises spraying said oxidant solution onto the tungsten plug structure.

16. The process of claim 15 wherein said oxidant solution comprises hydroxylamine.

17. The process of claim 13 further comprising the step of heating said oxidant solution to a temperature of at least about 60 degrees C prior to said applying said oxidant solution to the tungsten plug structure.

18. The process of claim 17 wherein said oxidant solution comprises hydroxylamine.

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19. The process of claim 17 wherein said applying said oxidant solution to the tungsten plug structure comprises spraying said oxidant solution onto the tungsten plug structure.

20. The process of claim 19 wherein said oxidant solution comprises hydroxylamine.